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Blodgettia sinensis sp. nov. from Lushan Mountain, China

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Abstract—A new asexual fungus *Blodgettia sinensis* is described and illustrated from a specimen collected on dead branches of an unidentified broadleaf tree in Lushan Mountain, China. The fungus differs from other described *Blodgettia* species in its ellipsoidal, brown, 3(–6)-euseptate conidia with rounded apices.

Key words—anamorphic fungi, hyphomycetes, saprobes, taxonomy

Introduction

Blodgettia Harv. was introduced by Harvey (1858) for *B. confervoides* Harv., which was originally collected on rocks near low-water mark in Key West, USA. The name was initially rejected because the type was a mixture of fungal and algal elements, but under the current code (Turland & al. 2018: Art. 9.14) the name is legitimate for the fungal component, emended by Wright (1881) as *B. bornetii* E.P. Wright, nom. illeg. [= *B. confervoides*]. The genus is characterized by short reduced or branched subhyaline conidiophores and solitary acrogenous fusiform moniliform euseptate conidia seceding schizolytically from monoblastic integrated terminal conidiogenous cells (Wright 1881, Seifert & al. 2011). Subsequently, Subramanian (1954) added

B. indica Subram. from India on dead stubble in water. Udaiyan (1992) published an invalid species "*B. aquatica*" Udaiyan from beech test blocks in storage tank and cooling tower in India, without the required typification details. Yang & al. (2017) added *B. saprophytica* C.L. Yang & al. from China on dead stems of an unidentified broadleaf tree.

Saprophytic hyphomycetes are essential components in forest ecosystems and occur with high species diversity on rotten wood, decaying leaves, and dead branches (Ellis 1971, 1976; Subramanian 1971; Castañeda-Ruíz & Kendrick 1991; Zhang & al. 2009; Delgado 2014; Ma & Zhang 2015; Arias & al. 2016; Ma & al. 2016; Xu & al. 2019). During continuing exploration for saprobic microfungi in southern China, an interesting hyphomycete with morphological features of *Blodgettia* was collected on dead branches. It differs from all previously described taxa, and therefore is proposed as new to science.

Blodgettia sinensis Jian Ma & R.F. Castañeda, **sp. nov.** Fig. 1

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Differs from other *Blodgettia* spp. by its ellipsoidal, brown, 3(–6)-euseptate conidia with rounded apices.

Type: China, Jiangxi Province, Lushan Mountain, on dead branches of an unidentified broadleaf tree, 8 November 2014, J. Ma (**Holotype**, HJAUP M0257).

Etymology: refers to the country in which the fungus was collected.

Colonies on the natural substratum effuse, hyaline to subhyaline. Mycelium partly superficial, partly immersed; hyphae branched, septate, smooth, subhyaline to pale brown. Conidiophores simple, not distinct from hyphae, subhyaline to pale brown, septate, 2–3.5 µm wide. Conidiogenous cells monoblastic, integrated, terminal, subhyaline to pale brown. Conidial secession schizolytic. Conidia solitary, acrogenous, ellipsoidal, 3(–6)-euseptate, distinctly constricted at the middle septum, brown, smooth, the apical cell sometimes triangular, with a rounded apex, the basal cell mostly crucible-shaped, 33.5–41 × 15.5–18.5 µm.

Comments – *Blodgettia sinensis* is distinguished from other species of *Blodgettia* by its ellipsoidal conidia with predominately three eusepta. It further differs from *B. confervoides* [= *B. bornetii*] by occurring on dead branches and not on green algae. The new species also differs from "*B. aquatica*" (conidia 32–52 × 15–25 µm) in its smaller conidia, from *B. saprophytica* (conidia 52.5–64 × 11.5–17 µm) in its shorter and wider conidia that lack a mucilaginous tunica, and from *B. indica*, which is

Fig. 1. *Blodgettia sinensis* (holotype, HJAUP M0257).
Hyphae, conidiophores, and conidia.

distinguished by longer and narrower (20–50 × 7.5–17.5 µm) conidia with strongly attenuated apical cells. In addition, both "*B. aquatica*" and *B. indica* were discovered in water.

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